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Growth performance of catfish, *Clarias gariepinus,* fed with different ration of spirulina, *Arthrospira platensis*

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Abstract

Spirulina was commercially used as a supplement in nutrition due to its high nutritional content. Improving the feed formulation using combined commercial fish feed with spirulina to the cultured fish might alleviate the fish's growth performance. This study was conducted to determine the growth performance (weight gain, specific growth rate (SGR), feeding efficiency (FE), feed conversion rate (FCR)) of catfish, *Clarias gariepinus*, fed with different ration of spirulina, *Arthrospira platensis*. Five experimental diets were developed by manipulating the percentage of spirulina in the fish feed containing 0% (control), 1%, 3%, 5% and 7% of home grown spirulina. All the catfish fry were bought from local fish farm and were acclimatized prior to the experiment. The fry were randomly selected with 30 fry per cage in triplicate. Each diet was fed to the fry twice daily *ad libitum* (5%-13% of body weight) for 90 days. All the growth parameters were recorded. Catfish with diet of 7% spirulina significantly higher in weight gain and SGR compared to control, but not with other treatment groups. Standard length, percent of survival, and FE of the catfish were increased with the increasing percentage of spirulina, but were not significantly different between all the diet groups. However, the FCR were decreased as spirulina percent increase in the diet, but also not significantly different between all the treatment groups. This study concludes that utilization of spirulina in the diet increase the growth performance of catfish.

Keywords: *Arthrospira platensis*, *Clarias gariepinus*, catfish, growth performance, spirulina.

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